Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Destruction of superconductivity and pseudogap closing in $Bi_2Sr_{2-x}La_xCuO_{6+\delta}$ by 58 T magnetic field S. ONO, YOICHI ANDO, (Central Reserch Institute of Electric Power Industry, Japan), F.F. BALAKIREV, J.B. BETTS, G.S. BOEBINGER, (NHMFL, Los Alamos National Laboratory) — We measure the magnetic-field dependence of the c-axis resistivity $\rho_c(H)$ in a series of $Bi_2Sr_{2-x}La_xCuO_{6+\delta}$ (BSLCO) single crystals for a wide doping range using pulsed magnetic fields up to 58 T. [1] The behavior of $\rho_c(H)$ is examined with the recent determination of the upper critical field H_{c2} by the Nernst effect measurements for the same BSLCO crystals. We find that the peak in $\rho_c(H)$ shows up at a field H_p that is much lower than H_{c2} and there is no discernable feature in $\rho_c(H)$ at H_{c2}. It is found that the doping dependence of H_p essentially track that of T_c. Moreover, a new method is proposed for estimating the pseudogap closing field H_{pg} from our BSLCO data, because we found that the method to estimate H_{pg} in $Bi_2Sr_2CaCu_2O_{8+\delta}$ [2] does not apply to our data. [1] S. Ono et al., cond-mat/0408603, To appear in PRB [2] T. Shibauchi et al. Phys. Rev. Lett. **86**, 5763 (2001).

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Date submitted: 30 Nov 2004 Electronic form version 1.4